

ISIS-II PL/M-86 V2.0 COMPILATION OF MODULE HEXOUT

OBJECT MODULE PLACED IN OUTP.OBJ

COMPILER INVOKED BY: :F0: OUTP.FLM DEBUG OPTIMIZE(2) DATE(FEBRUARY 2, 1982) XREF

```

1      $title ('HEX OUTPUT MODULE')
      hexout:
      do;

```

```

/*

```

```

      modified 3/28/81 R. Silberstein
      modified 3/30/81 R. Silberstein
      modified 4/9/81 R. Silberstein

```

```

*/

```

```

/*

```

```

      This is the module to produce the (hex-)output
      from the assembler. The interface to other modules
      goes through the subroutine

```

```

      EMITCODEBYTE (outputbyte,segmenttype).

```

```

      This routine outputs one byte of generated code of
      a specified segment type (code,data,stack,extra).

```

```

      The subroutine also updates the value of the current
      instruction pointer of the current segment (CIP),
      and prints the output code on the print line.

```

```

*/

```

```

      $include (:f1:macro.lit)
= $nolist
      $include (:f1:struc.lit)
= $nolist
      $include (:f1:outp.lit)
= $nolist
      $include (:f1:subr2.ext)
= $nolist
      $include (:f1:files.ext)
= $nolist
      $include (:f1:global.ext)
= $nolist

```

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 SER. # C81-162

```

84 1      dcl
      empty      lit '0ffh', /* buffer empty value */
      recordlimit lit '30', /* max no of bytes pr record */
      loccip      addr, /* local copy of instruction pointer */
      startfound byte, /* true if start record sent */
      gtyp byte, /* incoming byte type */
      gbyt byte, /* incoming byte */
      curtyp byte, /* current byte type */
      sum byte, /* used to compute check sum */
      buffer (35) byte, /* record buffer (RECORDLIMIT+5) */

```

```

recordlg    byte at (.buffer(0)),
recordtype  byte at (.buffer(3)),
offsetaddr  addr at (.buffer(1)),
bufpt      byte,      /* buffer index */

```

```

/* Record type conversion table */
/* ( to be changed later ??? ) */

```

```
rectyp$Istab(12) byte data
```

```

(Offh,eoftype,Offh,starttype,INTELdata,INTELdata,
 INTELdata,INTELdata,INTELsegment,INTELsegment,INTELsegment,
 INTELsegment),

```

```
rectyp$Dstab(12) byte data
```

```

(Offh,eoftype,Offh,starttype,DRcodedata,DRdatadata,
 DRstackdata,DRextradata,DRcodeseg,DRdataseg,DRstackseg,
 DRextraseg);

```

```
/****** subroutines *****/
```

```

35 1 rectypstab: procedure(n) byte;
36 2   declare n byte;
37 2   if intel$hex$on then do
38 3     return rectyp$Istab(n);
39 3   else do
40 3     return rectyp$Dstab(n);
41 3   end if;
42 2 end rectypstab;

```

```

95 1 switch$high$low: procedure(p);
96 2   declare p address, ch based p byte, (s1,s2) byte;
97 2   s1=ch;
98 2   p=p+1;
99 2   s2=ch;
100 2   ch=s1;
101 2   p=p-1;
102 2   ch=s2;
103 2 end switch$high$low;

```

```

104 1 writebyt: proc (ch);
105 2   dcl ch byte;
106 2   call outhexbyte(ch);
107 2 end writebyt;

```

```

108 1 writerecord: proc; /* write current recor to file */
109 2   call switch$high$low(.offsetaddr);
110 2   recordlg=bufpt-4;
111 2   sum=0; /* compute check sum */
112 2   i=0ffh;
113 2   do while (i:=i+1) < bufpt;
114 3     sum=sum+buffer(i);
115 3   end$while;
116 2   buffer(bufpt)=-sum; /* check sum */
117 2   call writebyt('');

```

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```
118 2      do i=0 to bufpt;      /* print hexbytes to file */
119 3          call hexlout(buffer(i),.help(0));
120 3          call writebyt(help(0));
121 3          call writebyt(help(1));
122 3      end$do;
123 2      call writebyt(cr);
124 2      call writebyt(lf);
125 2  end writerecord;

126 1  enternewbyt: proc(b); /* enter a new byte into buffer */
127 2      dcl b byte;
128 2      if bufpt > recordlimit then$do /* test if record full */
129 3          call writerecord;
130 3          offsetaddr=cip;
131 3          bufpt=4;
132 3      end$if;
133 2      buffer(bufpt)=b;
134 2      bufpt=bufpt+1;
135 2  end enternewbyt;

137 1  enterinput: proc;
138 2      call enternewbyt(qbyt);
139 2  end enterinput;

140 1  eofrecord: proc; /* write end-of-file record to file */
141 2      if curtyp<>empty then call writerecord;
142 2      recordtype=rectypstab(eofetype);
143 2      offsetaddr=0;
144 2      bufpt=4;
145 2      call writerecord;
146 2  end eofrecord;

148 1  startrecord: proc; /* write a start record to file */
149 2      dcl seglow byte at (.csegvalue),seghigh byte at (.csegvalue+1),
150 2          offslow byte at (.cip),offshigh byte at (.cip+1);
151 2      if pass=2 then$do
152 3          startfound=true;
153 3          if curtyp <> empty then call writerecord;
154 3          bufpt=4;
155 3          offsetaddr=0;
156 3          recordtype=rectypstab(starttype);
157 3          if csegspec then$do
158 4              call enternewbyt(seghigh);
159 4              call enternewbyt(seglow);
160 4          else$do
161 4              call enternewbyt(0);
162 4              call enternewbyt(0);
163 4          end$if;
164 3          call enternewbyt(offshigh);
165 3          call enternewbyt(offslow);
166 3          call writerecord;
167 3          curtyp=empty;
168 3      end$if;
169 2  end startrecord;

173 1  segmbyte: proc; /* write a segment value byte to file */
174 2      if pass = 2 then$do
```

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```
176 3      if curtyp <> gtyp then$do
178 4          if curtyp <> empty then call writerecord;
180 4          curtyp=gtyp;
181 4          recordtype=rectyptab(gtyp);
182 4          offsetaddr=0;
183 4          bufpt=4;
184 4          call enterinput;
185 4      else$do
187 4          call enterinput;
188 4          call writerecord;
189 4          curtyp=empty;
190 4      end$if;
191 3      end$if;
192 2      end segmbyte;

193 1      databyte: proc; /* write a data byte to file */
194 2          if pass=2 then$do
196 3              if (curtyp <> gtyp) or (loccip <> cip) then$do
198 4                  if curtyp<>empty then call writerecord;
200 4                  curtyp=gtyp;
201 4                  recordtype=rectyptab(gtyp);
202 4                  offsetaddr=cip;
203 4                  bufpt=4;
204 4              end$if;
205 3              call enterinput;
206 3              call hexlout(gbyt,.prefix(prefixptr)); /* output to listing */
207 3              prefixptr=prefixptr+2;
208 3          end$if;
209 2          cip=cip+1; /* update instruction pointer */
210 2          loccip=cip;
211 2      end databyte;

212 1      emitinit: proc public;
213 2          startfound=false;
214 2          curtyp=empty;
215 2      end emitinit;

216 1      emitterminate: proc public;
217 2          call eofrecord; /* write EOF record */
218 2      end emitterminate;

219 1      emitcodebyte: proc (b,typ) public;
220 2          dcl (b,typ) byte;
221 2          gbyt=b; /* move to global variables */
222 2          gtyp=typ;

223 2      do case typ-CSdata;

224 3          do; /* CS data */
225 4              if not startfound then$do
227 5                  call startrecord;
228 5              end$if;
229 4              call databyte;
230 4          end;
231 3          call databyte; /* DS data */
232 3          call databyte; /* SS data */
233 3          call databyte; /* ES data */
```

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```
234 3      call segabyte; /* CS value */
235 3      call segabyte; /* DS value */
236 3      call segabyte; /* SS value */
237 3      call segabyte; /* ES value */

238 3      end$case;

239 2      end emitcodebyte;

240 1      end$module hexout;
```

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CROSS-REFERENCE LISTING

DEFN	ADDR	SIZE	NAME, ATTRIBUTES, AND REFERENCES
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31	0000H	4	ABSADDR.	BYTE ARRAY(4) EXTERNAL(62)	
31	0000H	1	ACCLEN	BYTE EXTERNAL(66)	
31	0000H	1	ACCLSAVE	BYTE EXTERNAL(69)	
31	0000H	80	ACCUM.	BYTE ARRAY(80) EXTERNAL(67)	
31	0000H	30	ACCUMSAVE.	BYTE ARRAY(80) EXTERNAL(68)	
2			ADDR	LITERALLY	6 12 30 33 36 39 77 81 84
20	0000H		ALPHANUMERIC	PROCEDURE BYTE EXTERNAL(5) STACK=0000H	
23	0000H		ASCIICHAR.	PROCEDURE BYTE EXTERNAL(6) STACK=0000H	
219	0006H	1	B.	BYTE PARAMETER AUTOMATIC	220 221
126	0004H	1	B.	BYTE PARAMETER AUTOMATIC	127 134
31	0008H	1	BASEINDEX.	BYTE MEMBER(CURRENTSYMBOL)	
31	0008H	1	BASEINDEX.	BYTE MEMBER(OPERANDS)	
3			BASEREGBIT	LITERALLY	
3			BASEREGCOUNT	LITERALLY	
3			BREGBIT.	LITERALLY	
3			BREGCOUNT.	LITERALLY	
34	0007H	35	BUFFER	BYTE ARRAY(35)	84 114 116 119 134
34	002AH	1	BUFPT.	BYTE	110 113 116 118 128 132 134 135 145 155 183 203
14	0000H	1	CH	BYTE PARAMETER	15
104	0004H	1	CH	BYTE PARAMETER AUTOMATIC	105 106
47	0000H	1	CH	BYTE PARAMETER	48
41	0000H	1	CH	BYTE PARAMETER	42
26	0000H	1	CH	BYTE PARAMETER	27
20	0000H	1	CH	BYTE PARAMETER	21
11	0000H	1	CH	BYTE PARAMETER	12
23	0000H	1	CH	BYTE PARAMETER	24
44	0000H	1	CH	BYTE PARAMETER	45
96	0000H	1	CH	BYTE BASED(P)	97 99 100 102
17	0000H	1	CH	BYTE PARAMETER	18
31	0000H	2	CIP.	WORD EXTERNAL(31)	131 149 196 202 209 210
70	0000H		CLOSEX	PROCEDURE EXTERNAL(25) STACK=0000H	
68	0000H		CLOSEINCLUDE	PROCEDURE EXTERNAL(24) STACK=0000H	
72	0000H		CLOSEPRINT	PROCEDURE EXTERNAL(26) STACK=0000H	
64	0000H		CLOSESOURCE.	PROCEDURE EXTERNAL(22) STACK=0000H	
74	0000H		CLOSESYMBOL.	PROCEDURE EXTERNAL(27) STACK=0000H	
31	0000H	1	CODEMACROFLAG.	BYTE EXTERNAL(88)	
3			CODEMACROHEAD.	LITERALLY	
31	0000H	2	CODEMACROPTR	WORD EXTERNAL(83)	
2			CR	LITERALLY	123
31	0000H	2	CSCIP.	WORD EXTERNAL(36)	
4			CSDATA	LITERALLY	223
31	0000H	1	CSEG5PEC	BYTE EXTERNAL(34)	
31	0000H	1	CSEGTYPE	BYTE EXTERNAL(32)	
31	0000H	2	CSEGVALUE.	WORD EXTERNAL(33)	
31	0000H	1	CSPEC.	BYTE EXTERNAL(43)	
4			CSVALUE.	LITERALLY	
31	0000H	2	CURCSEG.	WORD EXTERNAL(39)	
31	0000H	2	CURDSEG.	WORD EXTERNAL(40)	
31	0000H	2	CURESEG.	WORD EXTERNAL(42)	

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31	0000H	9	CURRENTSYMBOL. . .	STRUCTURE EXTERNAL(79)	
31	0000H	2	CURSSEG.	WORD EXTERNAL(41)	
34	0005H	1	CURTYP.	BYTE	141 153 170 176 178 180 189 196 198 200 214
38	0000H	2	D.	WORD PARAMETER	39
35	0000H	2	D.	WORD PARAMETER	36
29	0000H	2	D.	WORD PARAMETER	30
32	0000H	2	D.	WORD PARAMETER	33
193	01EDH	100	DATABYTE.	PROCEDURE STACK=001AH	229 231 232 233
2			DCL.	LITERALLY	
38	0000H		DECOU.	PROCEDURE EXTERNAL(11) STACK=0000H	
31	0000H	1	DEFAULTDRIVE. . .	BYTE EXTERNAL(36)	
31	0001H	1	DESCR.	BYTE MEMBER(TOKEN)	
76	0000H	1	DEV.	BYTE PARAMETER	77
14	0000H		DIGIT.	PROCEDURE BYTE EXTERNAL(3) STACK=0000H	
4			DRCODEDATA. . . .	LITERALLY	34
4			DRCODESEG.	LITERALLY	34
4			DRDATADATA. . . .	LITERALLY	34
4			DRDATASEG.	LITERALLY	34
4			DREXTRADATA. . . .	LITERALLY	34
4			DREXTRASEG. . . .	LITERALLY	34
4			DRSTACKDATA. . . .	LITERALLY	34
4			DRSTACKSEG. . . .	LITERALLY	34
31	0000H	2	DSCIP.	WORD EXTERNAL(38)	
4			DSDATA.	LITERALLY	
31	0000H	1	DSPEC.	BYTE EXTERNAL(44)	
4			DSVALUE.	LITERALLY	
2			ELSEDO.	LITERALLY	
219	0268H	70	EMITCODEBYTE. . .	PROCEDURE PUBLIC STACK=0022H	
212	0251H	15	EMITINIT.	PROCEDURE PUBLIC STACK=0002H	
216	0260H	8	EMITTERKINATE. . .	PROCEDURE PUBLIC STACK=0014H	
34			EMPTY.	LITERALLY	141 153 170 178 189 198 214
2			ENDCASE.	LITERALLY	
2			ENDDO.	LITERALLY	
2			ENDFOREVER. . . .	LITERALLY	
2			ENDIF.	LITERALLY	
2			ENDMODULE.	LITERALLY	
2			ENDOFFILE.	LITERALLY	
2			ENDPROC.	LITERALLY	
2			ENDWHILE.	LITERALLY	
137	0112H	12	ENTERINPUT. . . .	PROCEDURE STACK=0016H	184 187 205
126	00E5H	45	ENTERNEWBYT. . . .	PROCEDURE STACK=0012H	138 160 161 164 165 167 168
140	011EH	38	EOFRECORD.	PROCEDURE STACK=0010H	217
31	0000H	1	EOFSET.	BYTE EXTERNAL(70)	
4			EOFTYPE.	LITERALLY	34 143
29	0000H		EQUAL.	PROCEDURE BYTE EXTERNAL(8) STACK=0000H	
31	0000H	1	ERRORPRINTED. . .	BYTE EXTERNAL(73)	
31	0000H	2	ERRORS.	WORD EXTERNAL(33)	
31	0000H	2	ESCI.	WORD EXTERNAL(35)	
4			ESDATA.	LITERALLY	
31	0000H	1	ESPEC.	BYTE EXTERNAL(46)	
4			ESVALUE.	LITERALLY	
2			FALSE.	LITERALLY	213
8	0000H	2	FCBADR.	WORD PARAMETER	9
8	0000H		FILEABORT.	PROCEDURE EXTERNAL(1) STACK=0000H	
3			FILEISTRUCTURE. . .	LITERALLY	
3			FILEOSTRUCTURE. . .	LITERALLY	
79	0000H		FILESETUP.	PROCEDURE BYTE EXTERNAL(29) STACK=0000H	

11	0000H	FILL	PROCEDURE EXTERNAL(2) STACK=0000H	
76	0000H	2 FILNAM	WORD PARAMETER	77
76	0000H	2 FILTYP	WORD PARAMETER	77
81	0000H	2 FIRSTMACROPTR. . .	WORD EXTERNAL(74)	
2		FOREVER.	LITERALLY	
2		FORMFEED	LITERALLY	
81	0000H	1 FULLSYMBTAB. . . .	BYTE EXTERNAL(76)	
84	0004H	1 GBYT	BYTE	138 206 221
82	0000H	GLOBALINIT	PROCEDURE EXTERNAL(89) STACK=0000H	
84	0003H	1 GTYP	BYTE	176 180 181 196 200 201 222
81	0000H	5 HELP	BYTE ARRAY(5) EXTERNAL(84)	119 120 121
32	0000H	HEX1OUT.	PROCEDURE EXTERNAL(9) STACK=0000H	119 206
35	0000H	HEX2OUT.	PROCEDURE EXTERNAL(10) STACK=0000H	
1	0000H	HEXOUT	PROCEDURE STACK=0000H	
81	0000H	1 I.	BYTE EXTERNAL(85)	112 113 114 118 119
76	0000H	IFILESETUP	PROCEDURE EXTERNAL(28) STACK=0000H	
81	0000H	1 IFLEVEL.	BYTE EXTERNAL(78)	
81	0000H	1 IFLIST	BYTE EXTERNAL(49)	
81	0000H	1 INCLUDEDDEFAULT . .	BYTE EXTERNAL(87)	
81	0000H	1 INCLUDEDON.	BYTE EXTERNAL(77)	
3		INDEXREGBIT. . . .	LITERALLY	
3		INDEXREGCOUNT. . .	LITERALLY	
52	0000H	1 ININCLUDEBYTE. . .	PROCEDURE BYTE EXTERNAL(16) STACK=0000H	
2		INIT	LITERALLY	
50	0000H	INSOURCEBYTE	PROCEDURE BYTE EXTERNAL(15) STACK=0000H	
4		INTELDATA.	LITERALLY	84
81	0000H	1 INTELHEXON	BYTE EXTERNAL(71)	87
4		INTELSEGMENT	LITERALLY	84
3		IREGBIT.	LITERALLY	
3		IREGCOUNT.	LITERALLY	
81	0000H	2 LENGTH	WORD MEMBER(OPERANDS)	
81	0000H	2 LENGTH	WORD MEMBER(CURRENTSYMBOL)	
17	0000H	LETTER	PROCEDURE BYTE EXTERNAL(4) STACK=0000H	
2		LF	LITERALLY	124
2		LIT.	LITERALLY	2 3 4 34
84	0000H	2 LUCCIP	WORD	196 210
81	0000H	2 MACROPTR	WORD EXTERNAL(75)	
81	0000H	1 MAXCOL	BYTE EXTERNAL(50)	
11	0000H	1 N.	BYTE PARAMETER	12
38	0000H	2 N.	WORD PARAMETER	39
35	0000H	2 N.	WORD PARAMETER	36
32	0000H	1 N.	BYTE PARAMETER	33
29	0000H	1 N.	BYTE PARAMETER	30
85	0004H	1 N.	BYTE PARAMETER AUTOMATIC	86 89 92
81	0000H	1 NEXTCH	BYTE EXTERNAL(65)	
81	0000H	1 NOERROR.	BYTE EXTERNAL(72)	
81	0000H	1 NOOPER	BYTE EXTERNAL(31)	
3		NOOVERCOUNT. . . .	LITERALLY	
3		NOOVERRIDEBIT. . . .	LITERALLY	
81	0006H	2 OFFSET	WORD MEMBER(OPERANDS)	
81	0006H	2 OFFSET	WORD MEMBER(CURRENTSYMBOL)	
84	0008H	2 OFFSETADDR	WORD AT	109 131 144 156 182 202
147	0001H	1 OFFSHIGH	BYTE EXTERNAL(31) AT	167
149	0000H	1 OFFSLOW.	BYTE EXTERNAL(31) AT	168
53	0000H	OPENHEX.	PROCEDURE EXTERNAL(19) STACK=0000H	
56	0000H	OPENINCLUDE.	PROCEDURE EXTERNAL(18) STACK=0000H	
60	0000H	OPENPRINT.	PROCEDURE EXTERNAL(20) STACK=0000H	

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54	0000H		OPENSOURCE	PROCEDURE EXTERNAL(17) STACK=0000H																
62	0000H		OPENSYNBOL	PROCEDURE EXTERNAL(21) STACK=0000H																
81	0000H	36	OPERANDS	STRUCTURE ARRAY(4) EXTERNAL(82)																
3			OPERANDSTRUC . . .	LITERALLY 81																
41	0000H		OUTHEXBYTE	PROCEDURE EXTERNAL(12) STACK=0000H															106	
44	0000H		OUTPRINTBYTE . . .	PROCEDURE EXTERNAL(13) STACK=0000H																
47	0000H		OUTSYMBOLBYTE . . .	PROCEDURE EXTERNAL(14) STACK=0000H																
5	0000H		OUTTEXT	PROCEDURE EXTERNAL(0) STACK=0000H																
75	0004H	2	P	WORD PARAMETER AUTOMATIC		96	97	98	99	100	101	102								
81	0000H	1	PAGESIZE	BYTE EXTERNAL(56)																
81	0000H	1	PASS	BYTE EXTERNAL(30)		150	174	194												
81	0000H	240	PREFIX	BYTE ARRAY(240) EXTERNAL(60)				206												
81	0000H	1	PREFIXPTR	BYTE EXTERNAL(61)		206	207													
81	0000H	1	PRINTDEVICE	BYTE EXTERNAL(53)																
81	0000H	1	PRINTON	BYTE EXTERNAL(47)																
81	0000H	1	PRINTSWI:CHOFF . . .	BYTE EXTERNAL(48)																
2			PROC	LITERALLY		20	23	32	35	38	41	44	47	50	52	54				
						56	58	60	62	64	66	68	70	72	74	76	79	104	108	
						126	137	140	148	173	193	212	216	219						
11	0000H	2	PT	WORD PARAMETER				12												
84	0007H	1	RECORDLG	BYTE AT				110												
84			RECORDLIMIT	LITERALLY				128												
84	000AH	1	RECORDTYPE	BYTE AT				143	157	181	201									
84	000CH	12	RECTYPDTAB	BYTE ARRAY(12) DATA				72												
84	0000H	12	RECTYPTAB	BYTE ARRAY(12) DATA				89												
85	0000H	34	RECTYPTAB	PROCEDURE BYTE STACK=0004H						143	157	181	201							
2			REENT	LITERALLY																
66	0000H		REWINDSOURCE	PROCEDURE EXTERNAL(23) STACK=0000H																
29	0000H	2	S	WORD PARAMETER				30												
96	002BH	1	S1	BYTE				97	100											
96	002CH	1	S2	BYTE				99	102											
81	0000H	12	SAVESOURCE	BYTE ARRAY(12) EXTERNAL(52)																
149	0001H	1	SEGHIGH	BYTE EXTERNAL(33) AT						160										
149	0000H	1	SEGLOW	BYTE EXTERNAL(33) AT						161										
3			SEGMBIT	LITERALLY																
173	01A7H	68	SEGMBYTE	PROCEDURE STACK=001AH						234	235	236	237							
3			SEGMCOUNT	LITERALLY																
81	0004H	2	SEGMENT	WORD MEMBER(OPERANDS)																
81	0004H	2	SEGMENT	WORD MEMBER(CURRENTSYMBOL)																
3			SEGTYPEBIT	LITERALLY																
3			SEGTYPECOUNT . . .	LITERALLY																
81	0003H	1	SFLAG	BYTE MEMBER(OPERANDS)																
81	0003H	1	SFLAG	BYTE MEMBER(CURRENTSYMBOL)																
81	0000H	1	SINFORM	BYTE EXTERNAL(57)																
81	0000H	80	SOURCEBUF	BYTE ARRAY(80) EXTERNAL(58)																
81	0000H	12	SOURCENAME	BYTE ARRAY(12) EXTERNAL(51)																
81	0000H	1	SOURCEPTR	BYTE EXTERNAL(59)																
2			SPACE	LITERALLY																
81	0000H	2	SSCIP	WORD EXTERNAL(37)																
4			SSDATA	LITERALLY																
81	0000H	1	SSPEC	BYTE EXTERNAL(45)																
4			SSVALUE	LITERALLY																
84	0002H	1	STARTFOUND	BYTE		152	213	225												
148	0144H	101	STARTRECORD	PROCEDURE STACK=0016H																227
4			STARTTYPE	LITERALLY				84	157											
2			STRUC	LITERALLY				31												
81	0002H	1	STYPE	BYTE MEMBER(OPERANDS)																

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81	0002H	1	STYPE.	BYTE MEMBER(CURRENTSYMBOL)	
84	0006H	1	SUM.	BYTE 111 114 116	
95	0022H	42	SWITCHHIGHLOW. . .	PROCEDURE STACK=0004H	109
81	0000H	1	SYMBOLDEVICE . . .	BYTE EXTERNAL(54)	
3			SYMBOLHEAD . . .	LITERALLY	
3			SYMBOLSTRUC. . .	LITERALLY 31	
81	0000H	2	SYMBTABADR . . .	WORD EXTERNAL(80)	
5	0000H	2	T.	WORD PARAMETER 6	
2			TAB.	LITERALLY	
8	0000H	2	TEXTADR.	WORD PARAMETER 9	
2			THENDO	LITERALLY 87 128 150 158 174 176 194 196 225	
81	0000H	30	TITLE.	BYTE ARRAY(30) EXTERNAL(55)	
81	0000H	4	TOKEN.	STRUCTURE EXTERNAL(64)	
2			TRUE	LITERALLY 152	
219	0004H	1	TYP.	BYTE PARAMETER AUTOMATIC 220 222 223	
81	0000H	1	TYPE	BYTE MEMBER(TOKEN)	
3			TYPEBIT.	LITERALLY	
3			TYPECOUNT. . . .	LITERALLY	
26	0000H		UPPER.	PROCEDURE BYTE EXTERNAL(7) STACK=0000H	
81	0002H	2	VALUE.	WORD MEMBER(TOKEN)	
104	004CH	13	WRITEBYT	PROCEDURE STACK=0008H 117 120 121 123 124	
108	0057H	140	WRITERECORD. . . .	PROCEDURE STACK=000CH 130 142 146 154 169 179 188 199	

MODULE INFORMATION:

CODE AREA SIZE = 02AEH 636D
 CONSTANT AREA SIZE = 0018H 24D
 VARIABLE AREA SIZE = 002DH 45D
 MAXIMUM STACK SIZE = 0022H 34D
 611 LINES READ
 0 PROGRAM ERROR(S)

END OF PL/M-86 COMPILATION

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